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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,229	02/19/2004	Philip A. Bernstein	MSFT-2911/115152.02	5212
41505 7590 11/25/2008 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891				
EXAMINER				
FLEURANTIN, JEAN B				
ART UNIT		PAPER NUMBER		
2162				
MAIL DATE		DELIVERY MODE		
11/25/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/782,229

**Applicant(s)**

BERNSTEIN ET AL.

**Examiner**

JEAN B. FLEURANTIN

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 76-84 and 94-104 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 76-78 and 94-98 is/are allowed.
- 6) ☒ Claim(s) 79-84 and 99-104 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

#### **DETAILED ACTION**

1. This is in response to the application filed on 07/30/2008.

The following is the status of claims:

Claims 1-75 and 85-93 have been canceled.

Claims 94-104 have been added. The Examiner discusses the limitations of claims 94-104 in the following rejection.

Claims 76-84 and 94-104 remain pending for examination.

#### ***Response to Arguments***

Applicant's arguments, filed 07/30/2008, with respect to the rejections have been fully considered and are persuasive. The rejections of the claims have been withdrawn.

However, the independent claims 79 and 82 and also all dependent claims are rejected.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 79-84 and 99-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPTNo. 5,765,159 issued to Srinivasan ("Srinivasan") in view of USPTNo. 5,317,727 issued to Tsuchida et al., ("Tsuchida").

As per claim 79, Srinivasan discloses "computer-readable storage medium having stored thereon computer-executable instructions for performing" (i.e., computer programs which reside in the main

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memory, and which are executed by the processors in the computer system, such as processor; see col. 3, lines 45-49) comprising:

"prior to receiving a query" (see col. 8, lines 29-30), for an attribute corresponding to an initial object in an object structure comprising a plurality of objects" (i.e., table corresponds to the set of columns; see col. 5, lines 10-16), "creating a structure context description that identifies each object in the object structure" (In light the specification at paragraph [0017], the purposed of creating a structure context is for associating that structure context description with every object in the structure. The method of creating a new path whose attribute (object) value matches the current path is disclosed by Srinivasan col. 10, lines 40-56);

"associating the structure context description with each object in the set of objects" (i.e., set of columns mapping to the base attributes (objects); see col. 5, lines 10-12); and

~~"receiving from an application the query that requests data corresponding to a first attribute of a first object in the set of objects"~~ (i.e., receiving the original object query; see col. 8, lines 29-31); and

~~"in response to upon~~ receiving the query" (i.e., responding to an object query; see col. 7, lines 36-37);

"retrieving data corresponding to the first attribute of the first initial object" (i.e., query retrieving only base attributes object; see col. 6, lines 29-32);

"returning the data corresponding to the first attribute of the first initial object to the application" (i.e., retrieving the data from relational database as a result of executing the object query; see col. 6, lines 32-35);

~~"using the structure context description to identify data corresponding to the first attribute of other objects in the set of objects at least one other object in the object structure that has the attribute"~~ (i.e., using schema mapping information; see col. 10, lines 49-56);

~~"retrieving [[the]] data corresponding to the first attribute of the other objects in the set of objects object structure"~~ (see col. 11, lines 34-40 and Fig. 8).

Srinivasan fails to explicitly disclose ~~the structure context description reduces time required to process the query after the query is received~~; placing in cache the data corresponding to the first attribute

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of the other objects in the ~~set-of-objects~~ object structure for future use and upon receiving a request for the attribute for one of the other objects, providing an appropriate data item from the data stored in the cache, whereby the attribute is provided in less time than if the attribute were not cached. However, Tsuchida discloses placing in cache the data corresponding to the ~~first~~ attribute of the other objects in the ~~set-of-objects~~ object structure for future use and upon receiving a request for the attribute for one of the other objects (see Tsuchida col. 5, lines 27-34 and col. 6, lines 2-5), providing an appropriate data item from the data stored in the cache, whereby the attribute is provided in less time than if the attribute were not cached (see Tsuchida col. 3, lines 32-39). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the system of Srinivasan by placing in cache the data corresponding to the attribute of the other objects in the object structure and upon receiving a request for the attribute for one of the other objects, providing an appropriate data item from the data stored in the cache, whereby the attribute is provided in less time than if the attribute were not cached as disclosed by Tsuchida (see Tsuchida col. 6, lines 5-20). Such a modification would allow the system of Srinivasan to provide a database processing method, where useless prefetching operation is omitted, and the necessary data is surely prefetched so as to reduce the input/output processing time, so that the performance of the overall system can be improved (see Tsuchida col. 3, lines 25-31), therefore, improving the accuracy and the reliability of the prefetching and caching persistent objects.

As per claim 80, in addition to claim 79, Srinivasan further discloses "comprising memory of a client application program, memory allocated to a data storage system" (i.e., computer program, residing in a memory; see col. 3, lines 46-50), and "a table of a relational database" (i.e., relational table; see col. 5, lines 10-16).

As per claims 81 and 84, in addition to claim 79, Srinivasan further discloses "retrieving by an object repository the data corresponding to the ~~first~~ attribute of the other objects in the ~~set-of-objects~~ object structure" (i.e., retrieving attributes objects; see col. 6, lines 58-60).

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As per claim 82, the limitations of claim 82 are similar to claim 79, therefore, the limitations of claim 82 are rejected in the analysis of claim 79, and this claim is rejected on that basis.

As per claim 83, in addition to claim 79, Srinivasan further discloses "memory allocated to a data storage system"; see col. 3, lines 46-50, "and a table of a relational database" (i.e., relational table; see col. 5, lines 10-16).

As per claim 99, Srinivasan discloses "each object is an instance of a COM ("Component Object Model") class" (see figure 14, queried class and corresponding text and col. 4, lines 56-59).

As per claim 100, Srinivasan discloses "the state of each object is organized according to at least one interface of a class associated with the object" (see col. 6, lines 29-35).

As per claim 101, Srinivasan further discloses "at least one collection and at least one attribute implemented by an interface of the associated class" (see col. 5, lines 28-35).

As per claims 102-104, the limitations of claims 102-104 are similar to claims 99-101, therefore, the limitations of 102-104 are rejected in the analysis of claims 99-101, and these claims are rejected on that basis.

**Claims 76-78 and 94-98 are allowed.**

**CONTACT INFORMATION**

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN B. FLEURANTIN whose telephone number is (571)272-4035. The examiner can normally be reached on 10:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E. BREENE can be reached on 571 - 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEAN B. FLEURANTIN/  
Primary Examiner, Art Unit 2162